

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: MARZONA, Alberto; SOMMARIVA, Giacomo

SERIAL NO.: 10/772,155

ART UNIT: 3673

FILED: February 4, 2004

EXAMINER: An, S. W.

TITLE: PROCESS AND APPARATUS FOR CONTINUOUSLY SHAPING A PLATE IN PLASTIC MATERIAL ACCORDING TO AN UNDULATED PROFILE

Amendment A: CLAIM AMENDMENTS

Claims 1 - 13 (canceled). These claims are canceled by the present amendment.

14. (new) An apparatus for continuously and permanently shaping an undulated profile into a plate of polymeric material comprising:

 a reel having a supply of the plate of polymeric material thereon, said supply being covered around said reel;

 a guide and positioning surface positioned so as to receive the supply from said reel thereof;

 a moulding and transferral wheel having a plurality of seats formed on a periphery thereof, said plurality of seats extending transversely relative to an advancement of the plate of polymeric material, said plurality of seats conforming to the undulating profile; and

 a pressing means positioned independent of and adjacent to said periphery of said wheel, said pressing means being axially mobile between a first position away from said plurality of seats and a second position received in at least a portion of said plurality of seats, said pressing means for forming the undulating profile in conjunction with said plurality of seats of said moulding and transferral wheel, said pressing means comprising:

a preform presser;
 a forming presser arranged downstream of said preform presser; and
 a stabilizing presser positioned downstream of said forming presser.

15. (new) The apparatus of Claim 14, said forming presser having a heating head thereon, and heating head being heated by an induction heater.

16. (new) The apparatus of Claim 14, each of said preform presser and said forming presser and said stabilizing presser having a head with a profile conforming to a shape of each of said plurality of seats.

17. (new) The apparatus of Claim 14, further comprising:

 a blade means cooperative with said moulding said transferral wheel, said blade means for detaching the plate from said plurality of seats.

18. (new) The apparatus of Claim 16, at least one of said preform presser and said forming presser and said stabilizing presser having a cooling circuit in heat exchange relationship with said head.

19. (new) The apparatus of Claim 14, said moulding and transferral wheel having cooling means therein for cooling each of said plurality of seats.

20. (new) The apparatus of Claim 14, said forming presser comprising:

 a heating head having an electrode therein;
 a support body joined to said electrode, said electrode having a lower portion countershaped to a shape of a seat of said plurality of seats; and
 a heating fluid feedback channel on an interior of said heating head.

21. (new) The apparatus of Claim 20, further comprising:

a probe positioned in said electrode of said heating head adjacent said lower portion of said electrode; and

a cooling fluid channel positioned between said probe and said heating fluid feedback channel.

22. (new) The apparatus of Claim 14, further comprising:

a column;

a vertical section extending from said column above said moulding and transferral wheel; and

an actuator means connected to said vertical section, said actuator means cooperative with said forming presser for moving said forming presser between said first and second positions between said preform presser and said stabilizing presser.

23. (new) The apparatus of Claim 14, further comprising:

a movement actuator cooperative with said moulding and transferral wheel.